

WHAT IS CLAIMED IS:

- 5 1. A belt module, which comprises:
- a) an intermediate section having opposed first and second walls, wherein the intermediate section has a width and a thickness defined by an upper surface and a lower surface and wherein the intermediate section comprises a web portion extending across the width between the first and second walls from one of the upper and lower surfaces to a portion of the way through the thickness of the intermediate section to form into a corrugated portion extending across the width between the first and second walls to the other of the upper and lower surfaces, wherein the corrugated portion has a series of regularly spaced ridges and grooves across the width of the module;
- b) a first plurality of link ends extending outwardly from the web portion and the ridges on the first wall of the corrugated portion;
- 20 c) a second plurality of link ends extending outwardly from the web portion and the ridges on the second wall of the corrugated portion and in a direction opposite the first link ends; and,
- d) transverse openings provided in each of the first and second link ends, wherein at least the openings in one of the first and second link ends is elongated in a direction along an axis of the link end extending from the intermediate section.
- 25 2. The belt module of Claim 1, wherein the first and second link ends each have a leg portion with substantially parallel sidewalls.
- 30 3. The belt module of Claim 2, wherein the first and second link ends each have a head portion that is wider than the leg portion, the head portion having a pair of
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substantially parallel sidewalls and an endwall.

4. The belt module of Claim 3, wherein a junction of the sidewalls and endwall of the head portion is rounded.

5. The belt module of Claim 4, wherein the endwall of the head portion is rounded and connects a top surface of the link end to a bottom surface of the link end.

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6. The belt module of Claim 1, further comprising an opening disposed through the belt module from the top surface to the bottom surface.

15 7. A radius conveyor belt, comprising:

a plurality of belt modules having a plurality of first link ends disposed in the direction of belt travel and having a plurality of second link ends disposed in the opposite direction, an intermediate section disposed between the first and second link ends and having a web and a corrugated portion disposed adjacent to the web the first and second link ends disposed such that a space capable of receiving a link end is formed between each adjacent link end, the space being open at one end and terminating in an rounded region at the opposite end, the plurality of first link ends being offset from the plurality of second link ends such that the first link ends align with the space between the second link ends such that adjacently positioned belt modules are capable of intercalating so that the first link ends of one belt module fit into the spaces defined between the second link ends of an adjacent belt module, the plurality of first link ends having a slot defined therein, the slot disposed transverse to the direction of belt travel and extending in the direction of belt travel, the plurality of second link ends having a

transverse opening defined therein; and,

a pivot rod extending transverse to the direction of belt travel through the openings in the second link end of one of the plurality of belt modules and
5 extending through the slotted openings in the first link end of an adjacent belt module such that the first and second link ends of the adjacent belt modules are intercalated and the adjacent belt modules are interlinked into adjacent hinged rows capable of
10 following a curved path.

2= 8. The radius conveyor belt of Claim 7, wherein the first and second link ends each have a leg portion with substantially parallel sidewalls.

15 3= 9. The radius conveyor belt of Claim 8, wherein the first and second link ends each have a head portion that is wider than the leg portion, the head portion having a pair of substantially parallel sidewalls and an endwall.

20 4= 10. The radius conveyor belt of Claim 9, wherein a junction of the sidewalls and endwall of the head portion is rounded.

25 11. The radius conveyor belt of Claim 9, wherein the endwall of the head portion is rounded and connects a top surface of the link end to a bottom surface of the link end.

Sub Part 12. The radius conveyor belt of Claim 7, further comprising an opening disposed through the belt module from the top surface to the bottom surface.

13. The radius conveyor belt of Claim 7, wherein the web and corrugated portion form a multilevel surface
35 defining the end of the space between adjacent link

14. A conveying system, comprising:

an intermediate portion disposed between the first
25 and second link ends and having a web and a corrugated
portion, the web formed in the center of the belt
modules and disposed such that a first side of the web
terminates in a first surface of the belt module and a
second side of the web terminates adjacent to the
30 corrugated portion;

a pivot rod extending transverse to the direction of belt travel through the openings in the second link end of one of the plurality of belt modules and extending through the slotted openings in the first link end of an adjacent belt module such that the first and second link ends of the adjacent belt modules are

intercalated and the adjacent belt modules are interlinked into adjacent hinged rows capable of following a curved path;

at least one middle belt module having a central portion with an angled face, the central portion disposed adjacent to the web between the top and bottom surfaces of the belt module; and,

a drive sprocket having teeth disposed around the perimeter thereof, the teeth capable of engaging with the rounded endwall of the link ends and capable of engaging with the angled face on the central portion of the middle module, to drive the endless conveyor belt around a conveying path.

15 2= 15. The conveying system of Claim 14, wherein the first and second link ends each have a leg portion with substantially parallel sidewalls.

20 3= 16. The conveying system of Claim 15, wherein the first and second link ends each have a head portion that is wider than the leg portion, the head portion having a pair of substantially parallel sidewalls and an endwall.

25 4= 17. The conveying system of Claim 16, wherein a junction of the sidewalls and endwall of the head portion is rounded.

30 5= 18. The conveying system of Claim 16, wherein the endwall of the head portion is rounded and connects a top surface of the link end to a bottom surface of the link end.

35 19. The conveying system of Claim 14, further comprising an opening disposed through the belt module from the top surface to the bottom surface.

